

DKS Associates

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MEMORANDUM

TO Beverly Chenausky, Arizona Department of Transportation
FROM Bill Loudon, DKS Associates
DATE April 8, 2005
SUBJECT ADOT Project TPD04-04 Identification of Emissions Sources for Pinal County
- Progress Report for the period between December 1, 2004 and March 30, 2005

Progress in the Reporting Period

Task 1 Define Geographical Scope and Analysis Parameters

Task complete

Task 2 Assemble and Collect Data

The DKS Team monitored the collection of traffic counts being done under separate contract by ADOT and Pinal County. Members of the DKS Team conducted the traffic counts and incorporated them into a GIS data base. The DKS Team also monitored the development of model data for the full county roadway network. New short, medium and long range forecasts of population, employment, travel and pollutant emissions are being developed by the Maricopa Association of Governments for an area that includes Pinal County. These forecasts are to be available in May 2005. Although these forecasts will not be used directly, they will form the foundation for the development of several forecast scenarios for Pinal County using local traffic data and local forecasts of population and employment growth.

The team evaluated USDA soil data from the study area and made arrangements with County staff for where and how the collection of traffic counts and dust samples for the sample of unpaved roads would be performed. The actual data collection is to be conducted in May 2005. The DKS Team also received raw meteorological data from Pinal County Air Quality Control District staff for reformatting into model-ready data sets that will be used in evaluating unpaved road travel impacts.

Task 3 Prepare and Analyze Emission Estimates

There was no activity in this task in the reporting period.

Task 4 Prepare Project Reports

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Project management activities occurred during this period and a progress report for the first quarter was prepared.

Task 5 Prepare PM₁₀ Attainment Plan Blueprint

The DKS Team continued to receive and review information on the structure of the new emission inventory platform being prepared for use by Arizona Department of Environmental Quality and local control agencies such as Pinal County AQCD.

Plans for the Next Reporting Period (Spring 05)

Task 1 Define Geographical Scope and Analysis Parameters

No activity is planned in this task in the next reporting period.

Task 2 Assemble and Collect Data

The DKS Team will obtain all of the most recent traffic counts conducted by Pinal County and ADOT in a GIS format. The DKS team will also obtain model data for the full county roadway network as well as information on local assessments of future population and employment growth.

The team will also proceed with the collection of traffic counts and dust samples for the sample of unpaved roads.

Task 3 Prepare and Analyze Emission Estimates

With the traffic counts and local data on population and employment forecasts, DKS will prepare several link-specific traffic forecasts to be used for emissions analysis for ozone precursors.

From the unpaved road soil samples, data necessary to the analysis of unpaved road emissions will be developed. The DKS Team will compute unpaved road travel emission factors by soil region and commence work on constructing modeling input files to be use in the assessment of downwind impacts.

Task 4 Prepare Project Reports

A progress report and invoice will be prepared and a technical memorandum on the work in Task 2 will be prepared.

Task 5 Prepare PM₁₀ Attainment Plan Blueprint

Data on the use of air quality models in other serious PM₁₀ nonattainment areas will be collected through telephone interviews of staff and review of attainment plan modeling documents.

Problems Encountered

No significant issues were encountered in this time period

Status Report
ADOT Project TPD04-04
January 2005 (Sierra Research)

During January, Sierra Research evaluated the soils data of western Pinal County and began processing meteorological data for use in dispersion modeling. The assembly of USDA Soil Survey data into spreadsheet form was completed and discussions were conducted with Pinal County Air Quality Control District staff with respect to the selection of unpaved roads sites to be used for traffic counting and the collection of soil samples in different soil regions. Meteorological data for 2004 was received from PCAQCD and the reformatting of the data to serve plume dispersion modeling was begun.

Status Report
ADOT Project TPD04-04
November - December 2004 (Sierra Research)

The principal activity completed during this period was reviewing USDA Soil Survey data and related maps and assembling a spreadsheet of Pinal County soil characteristics (e.g., soil #, name, group, silt content, etc.). Other tasks included the preparation of edits to Sierra's scope of work for the project, the preparation of a summary of the work to be completed under the project and requesting a copy of the Lakes Environmental proposal to ADEQ which outlines the structure of the emissions inventory system that will be developed (and recommended for use in Pinal County).